REMARKS / DISCUSSION OF ISSUES

Claims 1, 4-8, 10-11, 13-14, 17, and 21-28 are pending in the application. Claims 21-28 are newly added.

The Examiner is respectfully requested to state whether the drawings are acceptable.

The Office action rejects:

claims 1 and 4 under 35 U.S.C. 102(b) over Sturm (USP 6,087,196);

claims 7-8 under 35 U.S.C. 103(a) over Sturm; and

claims 5 and 14 under 35 U.S.C. 103(a) over Sturm and Hung et al. (USP 5,608,287, hereinafter Hung).

The applicants respectfully traverse this rejection.

Claim 1, upon which claims 4-5, 7-8, and 14 depend, claims an electroluminescent device comprising an electrode comprising a metal or a metal alloy having a melting point of 250 °C or less that is ink-jet printed in a molten form.

Sturm teaches the ink-jet printing of an electrode using a supersaturated solution of metal particles that are suspended in a solvent (Sturm, column 6, lines 11-17).

The Office action relies on Hung for teaching the use of electrodes with low work functions. Hung teaches the use of rare earth silicides or metal borides, and does not address ink-jet printing, or the use of metals with low melting points.

The Examiner acknowledges that Sturm does not teach printing the metal in molten form, and asserts that "it is old and well known in the art to provide an electrode with a low melting point so that the temperature while manufacturing is low enough to save on costs as well as prevent unnecessary damage that comes about in high temperatures". The applicants agree that low manufacturing temperatures are preferred, but this fact does not suggest the use of a metal with a low melting point in the process of Sturm, because Sturm's process is a low temperature manufacturing process. One of ordinary skill in the art would not be lead to use a metal with a low

melting point in Sturm, because Sturm's process is a low-temperature process that is well suited for metals with high melting points.

Because there is no suggestion to use a metal with a melting point of 250 °C or less in Sturm's process or device, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 1, 4-5, 7-8, and 14 over Sturm and/or Sturm and Hung.

The Office action rejects claim 6 under 35 U.S.C. 102(b) over Sreeram (USP 6,140,759). The applicants respectfully traverse this rejection.

Claim 6, upon which claim 17 now depends, claims an electroluminescent device comprising an electrode that comprises a metal or a metal alloy having a melting point of 250°C or less that is ink-jet printed in a molten form, and a relief pattern for patterning the pattern-wise ink-jet printed electrode.

Sreeram teaches a relief pattern that facilitates the ink-jet printing of an electrode, but Sreeram specifically teaches the use of conductive inks (a mix of silver powder and a joining compound) for the ink-jet process (Sreeram, column 13, lines 8-34).

Because Sreeram does not teach the printing of molten metal having a melting point of 250°C or less, as specifically claimed by the applicants, the applicants respectfully request the Examiner's reconsideration of the rejection of claim 6 over Sreeram.

The Office action rejects:

claims 10 and 13 under 35 U.S.C. 103(a) over Sturm and Sasaki et al. (JP2003-205367A, hereinafter Sasaki); and

claim 11 under 35 U.S.C. 103(a) over Sturm, Sasaki, and Sreeram.

The applicants respectfully traverse these rejections.

Claim 10, upon which claims 11 and 13 depend, claims a method of manufacturing an electroluminescent device by ink-jet printing molten metal or metal alloy on a surface in accordance with a desired pattern.

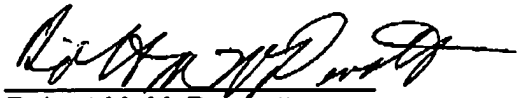
The Office action acknowledges that Sturm does not teach printing the metal in molten form, and, as noted above, Sreeram teaches the printing of conductive ink. The Office action asserts that Sasaki teaches ink-jet printing of molten metal. The applicants respectfully disagree with this characterization of Sasaki.

Based on the translated abstract of Sasaki, Sasaki teaches an ink-jet apparatus for discharging a liquid drop, which includes a vibrator that vibrates the tank of ink so as to impart an inertial energy that facilitates the discharge of the drop. Sasaki appears silent with regard to an apparatus that prints molten metal.

Because neither Sturm, nor Sasaki, nor Sreeram, individually or collectively, teach or suggest a method of manufacturing an electroluminescent device by ink-jet printing molten metal or metal alloy, as specifically claimed by the applicants, the applicants respectfully request the Examiner's reconsideration of the rejection of claims 10, 11, and 13 over Sturm and Sasaki, and/or Sturm, Sasaki, and Sreeram.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Robert M. McDermott
Reg. 41,508
Att'y for Applicant(s)

1824 Federal Farm Road
Montross, VA 22520
Phone: (804) 493-0707
Fax: (215) 243-7525